The Boston Medical and Surgical Journal

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August 12, 1920

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Address.

FLORENCE NIGHTINGALE.*

MAY 12, 1820—1920.

By Alfred Worcester, M.D., Waltham, Mass.

In the summer of 1895 I had the rare privilege of an interview with Miss Nightingale. My English friends in the nursing world had told me that there was no possibility of my seeing her, as she would not see even her dearest and oldest friends and was always averse to calls from strangers, especially men. It seemed indeed hopeless; but I wrote to her that, after studying many hospitals and nursing schools including Kaiserswerth, I was much perplexed amid the varying systems and very desirous of her advice.

She replied with a note of introduction to Miss Crossland, the Home Sister at St. Thomas's, who, she said, would give me all the information I wanted. Of course I obeyed. But afterwards I wrote again saying that I had not yet found the guidance that I believed could be given only by one who knew the whole field. Then she very kindly asked me to call upon her at a certain hour.

You may be sure I was at her door on the minute. But I had difficulty in making my cabby drive past Marble Arch, for, as he complained, his friend the bobby who had stopped us had confided to him that the Queen would soon drive by. He was much disgusted with my insistence that instead of waiting he should drive me to Number 10 South Street. Even had he known that was the home of Florence Nightingale, he still would have thought me crazy in sacrificing a sight of Queen Victoria. And yet who can doubt to which of these two famous women belongs the more enduring fame!

Miss Nightingale was half reclining on her couch in the drawing room. I could not help noticing her beautiful fresh complexion and coloring, her silvery hair, her sweet and low-toned voice. But soon I was entirely occupied in answering her questions about her friends in Germany and America. Only occasionally could I get in my questions, and when tea was served, not till after she said that evidently she had not made it to my liking, could I stop to drink it.

I soon found that she was familiar with the status of nursing in this country. "Why are your pupil nurses given so much theoretical instruction?" she asked, nor was she satisfied with my counter question if ever there is danger in a nurse or any one else knowing too much. She spoke rather bitterly of the modern trend of training schools, of the lack of missionary spirit and of the growing commercialism among nurses. In earlier years the new profession of nursing appealed to the most cultured and devout women but it is not so now, she said.

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* An address given in Washington, D. C., at the celebration of the hundredth anniversary of her birth.

To my question which of all the different systems of training was nearest her ideal she named the Metropolitan District Nursing Association, which some few years before she had recommended as the model and basis for the Queen's Jubilee Institute for Nurses, where training in home nursing, rather than in hospital nursing, was the essential feature.

She promised to receive and advise any of our nurses we might send to London. I need not add that this promise was made good, nor shall I attempt to describe the benefits so received.

When finally I insisted upon taking my leave she detained me a few moments to ask God's blessing upon "our work."

Ever since that day I have been able to understand her visitors' inability afterwards to describe their feelings as they came and went. It was indeed

> "As if a door in heaven should be
> Opened and then closed silently."

Were it not for my conviction that every least bit of Florence Nightingale's life and labors ought to be recorded, and that every impression she made upon any of us should be, so far as is possible, shared with others, I would apologize for what may seem an egotistical story. Moreover, my knowledge of her depends not so much upon this one interview, and the few letters she was so kind as to write me, as upon what her friends have told me. Chief among these was her favorite pupil, Miss Pringle, Mrs. Wardroper's successor as Superintendent of the Nightingale School for Nurses, who afterwards for two years was the Matron of our Waltham Hospital. She brought with her several hundred of Miss Nightingale's letters. After her return to England she was the last visitor admitted to see her "beloved chief," and she was the one nurse especially thanked by Sir Edward Cook for her contributions to his admirable biography.

To say that his *Life of Florence Nightingale* is entirely satisfactory to her friends is enough: no higher praise could be given. And for those who read it there is little need of anything else. Unfortunately, the earlier and entirely unauthorized "*Life,*" by Sarah A. Tooley, weak and washy as it is, and Strachey's patronizing and coldly brilliant "*Florence Nightingale*" in his recent *Eminent Victorians* will be more commonly read than Sir Edward Cook's two large volumes, which, by the way, might with great public advantage be abridged into a smaller volume. At any rate, for the inspiration of the nursing world there ought to be available an authoritative history of Miss Nightingale's nursing leadership. For although all of her marvelously varied activities were under the same high inspiration of serving God in serving His children, and therefore essentially coherent, it is not easy for those especially interested in the nursing profession to appreciate her leadership in reforming the British Army Medical Service or in the sanitation of India. More difficult still is it except for students of theology and philosophy to follow her profound meditations in those realms.

For common folks it is awesome enough to learn of her helpful friendship to Jowett in his interpretation of Plato, of Cardinal Manning's and Dean Stanley's reliance upon her judgment, and of her powerful influence in the government of India. The details and proofs once given with copious references to bluebooks and to the Letters and Lives of her associates, need not be repeated. The astonished world is now convinced of her versatile preëminence, and Florence Nightingale is already ranked as one of the ablest women of all time.

Today, when we commemorate the centennial anniversary of her birth, I propose to speak only of her leadership in the profession of nursing and more particularly of her influence in this country.

We used to hear of "born nurses." That still means something although now laughed at. Rightly understood, it means in little girls the early awakening of what on earth is most heavenly, motherly love. If ever there was a born nurse, certainly Florence Nightingale was one, and the touching stories of her childhood are not needed to prove it. Fond as she was in her girlhood of music and dancing and of all social allurements, for her heart's real satisfaction she would slip away to some sick cottager's bedside. "Tall and willowy, straight and graceful of figure, with thick brown hair and exquisite complexion, if not beautiful she was of elegant and distinguished appearance."

That is the picture we have of her from those who knew her in her young womanhood.

Her own estimate of herself, as revealed in her diaries and letters of this period, is most humble. Sloth, irregularity, desultoriness, she names as her besetting temptations, from which she was continually praying for deliverance. Her prayers availed! Always intensely religious, intent upon God's service, she sought her own salvation by saving others.

Among her large circle of relatives she was a true Sister of Mercy. But she longed for wider fields. She increasingly felt that only in a life of nursing or other service to the afflicted could her being find its rightful end and scope. And just as clearly she recognized that if ever she were to have opportunity of doing good work in nursing she must first learn her business.

Here we have the keynote of her character and the explanation of her extraordinary usefulness. Her general education, we must remember, had been carried farther than the college standards of today. Proficient in Greek and Latin, perfectly at home also in the French, German and Italian languages, she besides was well up in the natural sciences and in philosophy. She not only had travelled extensively, she also had lived abroad for long periods. During these years she had made visits in several Homes of the Roman Catholic nursing sisterhoods—in Alexandria, Paris, Bruges, Italy—and in Fliedner's Protestant institution at Kaiserswerth. And well she knew the comparative degradation of the nurses in the London hospitals.

Nursing is often spoken of as a new profession. But it is an old art, one of the oldest. As an honorable vocation for women it is coeval with Christianity. Sister Phoebe, whom St. Paul commended to the congregation at Rome, had been a district visiting nurse in the seaport of Athens. The mosque of San Sophia was in earlier ages the church of the deaconess nurses. Revived by the Protestants in the 15th century, and in the 17th century by the great Roman Catholic sisterhoods, nursing again became a distinctively religious vocation.

Deeply religious as she was, and greatly as she admired the Sisters and the Deaconesses, Florence Nightingale never could have been contented in these orders. Nor is there any support for the tradition that she ever thought of joining them. She saw further ahead. For herself, and then for others, she longed for emancipation from social thraldom. Not that nursing in her estimation was ever separable from true religion, for from the first it was with her always a "calling," but in it she saw glorious opportunity for herself and other women.

This generation cannot easily imagine the difficulties she encountered. But the opposition of her family can be understood when we read in one of her letters to her father that the head nurse in one of the London hospitals told her "that in the course of her large experience she had never known a nurse who was not drunken, and that there was immoral conduct practised in the very wards." Some of us who remember the pre-training school days need no such foreign testimony. And for my own profession it is equally easy to remember, and to regret, the opposition of the doctors to having noble-minded women in the wards. Very pleasant is it to be reminded that one of the notable exceptions to give her encouragement was our Dr. Samuel Howe, the teacher of Laura Bridgman.

Not until 1851 did Miss Nightingale gain her family's consent to begin serious training for what for many years she had determined should be her life work. She had spent a fortnight in Kaiserswerth the previous summer. Now she applied to be received there as a regular probationer. Good Pastor Fliedner tried to dissuade her. He was afraid of her delicate hands. "You would not want to scrub that corridor floor," he said. Indeed she would, and she did it well. "And it was a very dirty floor, too," as she herself told me, laughing heartily over the story.

Curiously the same test of earnest purpose was likewise passed by Booker Washington, who after he had been almost refused at Hampton, was allowed to clean a school room. During that night he swept and dusted it over and over again, until in the morning its cleanness fairly shone and he was accepted.

After three months of training in that small hospital Pastor Fliedner held for her the usual consecration service and dismissed her with his blessing. That was all the regular training Florence Nightingale ever had. The hospital and the nursing in it, as she afterwards said, were crude, but the spirit was there and the tone excellent and admirable. Would that the latter could be said of all our modern hospitals with their palatial appointments!

In these days when at least three years are deemed necessary for a nurse's training, the question arises how could so short a course have been considered enough by one who so fully understood the necessity of thorough preparation. The answer is that before she went to Kaiserswerth she was already a model housekeeper; she knew how to modify the home for the comfort of the sick and suffering; she had acquired sufficient knowledge of anatomy and physiology and hygiene; she knew the history of the art of nursing; and she had intently observed the actual practice of the art in her visits to the famous hospitals of Europe. She knew her lack of technical training and that is what she went there for.

In after years she herself occasionally sent out pupils from the Nightingale School of Nursing to the hospital matronships, before they had finished the prescribed course, which there as everywhere else is framed to fit not the excellent but the average probationer.

After Kaiserswerth and before the Crimaea, Miss Nightingale had a year's service as matron of a small private hospital in London and also a short term of service as a volunteer nurse in the Middlesex Hospital during the cholera epidemic.

As often happens in this world, when great leaders are needed they are found at hand. And then it becomes plain that all their previous lives have been just the right preparation for the exalted service they are called upon to render. This cannot be by mere chance. And if ever in the advance of civilization the providence of God is recognizable, surely we have an illustrious example in Florence Nightingale's fitness for her Crimaean service. That she alone was fit for it is shown by the difficulty in finding even a few able to serve as her subordinates. After most diligent search, only 38 nurses could be found in England to go with her, and of these many were afterwards found wholly unworthy.

The story of her going, and of the frightful conditions that confronted her, is too well known to need repetition. An old British General* once told me that as he lay on his cot in the hospital at Scutari they could see across the courtyard the ever increasing pile of amputated legs and arms thrown out from the operating room windows. One day, as they saw the ghastly mass being carried off in an army mule cart, the wounded officer next him said, "I believe that English nurse has come." And so she had, that very day. But it was not that pile of rotting flesh, nor the vermin, nor the corpses she found chucked under the beds to make room for incoming patients, much less was it the lack of utensils, of beds, of clothing, or of sufficient food that proved to be her greatest obstacle. That was found rather in the opposition of the surgeons and commissaries, bound up as they were by red tape and army traditions. And yet she triumphed.

Doubtless her influence over brutal officers, and over the common soldiers (from whom in her long experience, as she afterwards testified, she had never heard an offensive word), was partly owing to her charming womanliness which was only enhanced by advancing years. But the real secret of her extraordinary mastery over others is in her own complete self-mastery.

Miss Pringle heard from an eye witness of the scene, how one day as Miss Nightingale was carrying across the courtyard a can of arrowroot an officer rode to meet her and angrily demanded what right she had to touch those stores. She deigned no answer, but, putting down the heavy can, she looked him straight in the eye until he, abashed, turned his horse and rode off. Then she quietly lifted her load and went her way.

Another distinguishing trait of Florence Nightingale's character was her eagerness to learn. She always found out what others knew before venturing to tell them what she knew, which accounts for her continued accumulation of knowledge. Thus during her two years in the Crimaean campaign, as an apt learner from M. Soyer, she became an expert dietitian. And, from the Sanitary Commission, sent out at her request from England, she learned the principles and practice of modern sanitation. But this passion for knowledge was most discriminating. She wanted to learn only what could be utilized in the service of mankind, and that, too, only in her own special line. She never lost sight of, nor did she ever swerve from following, her ideals. This singleness of purpose, and her energy in its execution, largely explains her powerful leadership.

Florence Nightingale herself held that nursing was the least important of the functions into which she had been forced in the Crimaean War. As purveyor, commissary, hospital administrator, sanitary inspector, and instigator of all sorts of reforms, it is true she had gone far beyond the simple nursing superintendence that had been expected of her. In establishing coffee houses, schools, recreation halls, reading rooms, money order and home communication agencies for the soldiers, and, for their wives and other female camp followers, laundries and sewing rooms where they could earn an honest living, she went so far ahead that only in the last great war have we caught up with her.

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* Sir Alexander Montgomery-Moore.

That the death rate in the Crimaean hospitals fell from 420 to 22 per thousand in her first six months there is of course partly due to the elapse of time since the great battles of Alma, Balaclava and Inkerman, in the autumn of 1854, and also to the advent of spring, as well as to the reforms she instituted. But that does not diminish the credit due her for stopping the needless deaths of thousands. Nor can there be any question of her right to the preëminence as a nurse that the world has accorded to her. The testimony in her favor from the patients she served is overwhelming. How with patients numbered by the thousand, and with four miles of corridors between the beds, she could manage to be present at most of the capital operations and at the death-beds is almost unbelievable. But it is easy to believe that she often was on duty twenty hours on the stretch and that she hardly stopped for snatches of food; neither is it any wonder that she herself nearly died of the Crimaean fever nor that when the soldier patients believed her to be dying they turned their faces to the wall and cried.

Some of the letters sent home by the poor soldiers became famous. Here is one: "What a comfort it was to see her pass even. She would speak to one and nod and smile to as many more; but she could not do it to all, you know. We lay there by hundreds; but we could kiss her shadow as it fell, and lay our heads on the pillow again, content." And still another: "Before she came, there was cussin' and swearin,' but after that it was holy as a church."

These letters and the following letter from the Commissioner of the *Times* fund were the foundation of Longfellow's "Santa Filomena." "Wherever there is disease in its most dangerous form and the hand of the despoiler distressingly nigh, there is that incomparable woman sure to be seen. Her benignant presence is an influence for good comfort, even amid the struggles of expiring nature. She is a 'ministering angel' without any exaggeration in these hospitals, and, as her slender form glides quietly along each corridor, every poor fellow's face softens with gratitude at the sight of her. When all the medical officers have retired for the night and silence and darkness have settled down upon these miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds."

Lo! in that house of misery
A lady with a lamp I see
  Pass through the glimmering gloom,
  And flit from room to room.

And slow, as in a dream of bliss,
The speechless sufferer turns to kiss
  Her shadow, as it falls
  Upon the darkening walls.

As if a door in heaven should be
Opened and then closed silently,
  The vision came and went,
  The light shone and was spent.

On England's annals, through the long
Hereafter of her speech and song,
  That light its rays shall cast
  From portals of the past.

A lady with a lamp shall stand
In the great history of the land,
  A noble type of good
  Heroic womanhood.

Great as was Florence Nightingale's immediate service in nursing the sick and wounded soldiers in the Crimaean War, in reforming hospitals and in so saving thousands of lives, her still greater service was for the future, in showing the way to a new and high calling for women, in opening for them a new profession, a new sphere of usefulness. It is for this glorious achievement that she richly deserves her immortal fame.

After her return to England in 1856 she allowed herself only a few weeks' rest. Her invalidism then, as often afterwards, was largely a fiction, a convenient screen that allowed her to shrink from the adoring public and at the same time to continue her great work for the health of the army. Thus, while supposed to be lying on her bed in painful exhaustion, she was visiting the Queen, writing exhaustive reports and forcing the British Government to sanitary reforms.

While so occupied during the four following years she by no means forgot her main purpose of advancing the profession of nursing. Her *Notes on Nursing*, first published in December, 1859, was at once recognized as an epoch-maker. The whole world was thrilled by it: nor has it ever been surpassed. Our first American training schools made it their Bible.

Doubtful of her strength for undertaking the management of the "Nightingale Fund," she begged the trustees to do with it whatsoever they pleased; but they wisely insisted that this great tribute from the people, amounting to £44,000, which she had devoted to an "Institution for the training, sustenance and protection of Nurses and Hospital attendants," should be utilized only under her directing influence. Somewhat reluctantly she undertook the task, and the Nightingale School for Nurses was opened at St. Thomas's Hospital, June 24, 1860. This was the first English School for lay nurses, and it has had the greatest influence. But it must not be forgotten that the training of nurses began long before. Fliedner's School at Kaiserswerth was already in its 25th year, and the Gasparins had started their school at La Source in Lausanne the year before. Neither of these schools, it is true, was unsectarian, nor indeed was the Nightingale School, which even a quarter century later dismissed its efficient superintendent when she joined the Roman communion. Moreover, St. Thomas's Hospital was chosen for affiliation because its matron, Mrs. Wardroper, was already an eminent teacher of nursing. And what of Miss Nightingale's own previous service in training the nurses she had in the Crimaea, can there be any question of the worth of their training?

The distinctive advance made by the Nightingale School was due to its independence. From the first its liberal endowment has allowed it to hold fast its educational ideals. And there it has been proved that the best nursing service in a hospital can be given by pupil nurses of a school that has for its main purpose their education, and not the pecuniary advantage of the hospital. No one has ever seen this fact more clearly than Miss Nightingale herself, and the early training schools in this country, which followed her advice, were established on this basis.

That more than ten years elapsed, including the years of our great Civil War, before we in this country began our imitation of the Nightingale School for Nurses is at least partially explained by our estrangement from Great Britain during those years. While Miss Nightingale was in the employ of the War Office in organizing army hospital units for the contemplated invasion of our northern states by way of Canada, it was natural enough that we should not try to withdraw her attention to our domestic problems. Not until the era of good feeling following the arbitration of the Alabama claims did we ask any favors from England. Then we began applying for Miss Nightingale's advice.

Just what was her influence in the establishment of American trained nursing? No complete answer can be given, for her influence, direct and indirect, was world-wide; but nevertheless there are some definite contributions for which Americans must forever be grateful. There can be no doubt that the school Dr. Susan Dimock started in 1871, which certainly was the earliest training school in America,* was in accordance with what she had learned at Kaiserswerth and from Miss Nightingale. But, owing to the tragic early death of this brilliant young Southerner, there is left only most scanty record of this indebtedness.

The first definitely recorded help given by Miss Nightingale to proposed American schools of nursing can be found in the First Report of the Committee on Hospitals of the New York State Charities Aid Association, dated December 23, 1872. Dr. W. Gill Wylie, a member of this committee, spent three months in England, and on the Continent, studying systems of nursing as practised in the schools and hospitals of those countries. Upon his return he reported in detail upon the school at St. Thomas's. He did not succeed in seeing Miss Nightingale, who at that time was overwhelmed by family affliction, but he brought back from her a wonderful letter that ought never to be forgotten. Here are some extracts from it:

"I wish your Association Godspeed, with all my heart and soul, in their task of reform, and will gladly, if I can, answer any question you may think it worth while to ask.

"You say, 'The greatest difficulty will be to define the instructions, the duties, and the position of the nurses, in distinction from those of medical men,' and you are 'anxious to get my views in relation to this subject.'

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* Miss Linda Richards, the first American nurse to receive a diploma, was graduated from this school at the New England Hospital for Women and Children in September, 1873. For the following year she was Night Superintendent of Nurses in the Bellevue Hospital Training School which, although begun in May, 1873, gave no regular class instruction until the autumn of 1874. Miss Richards had then become the Superintendent of the Training School just started at the Massachusetts General Hospital.

"Is this a difficulty? . . . . Nurses are not 'medical men'! On the contrary, the nurses are there, and solely there, to carry out the orders of the medical and surgical staff, including, of course, the whole practice of cleanliness, fresh air, diet, etc. The whole organization of discipline to which the nurses must be subjected is for the sole purpose of enabling the nurse to carry out, intelligently and faithfully, such orders and such duties as constitute the whole practice of nursing. They are in no sense medical men. Their duties can never clash with the medical duties. Their whole training is to enable them to understand how best to carry out medical and surgical orders, including (as above) the whole art of cleanliness, ventilation, food, etc., etc., and the reason why this is to be done this way and not that way.

And for this very purpose—that is, in order that they may be competent to execute medical directions—to be nurses and not doctors—they must be, for discipline and internal management, entirely under a woman, a trained superintendent, whose whole business is to see that the nursing duties are performed according to this standard. For this purpose may I say:

"1. That the nursing of hospitals, including the carrying out of medical officers' orders, must be done to the satisfaction of the medical officers, whose orders regarding the sick are to be carried out. And we may depend upon it that the highly trained intelligent nurse and cultivated moral woman, will do this better than the ignorant, stupid woman, for ignorance is always headstrong.

"2. That all desired changes, reprimands, etc., etc., in the nursing and for the nurses, should be referred by medical officers to the superintendent.

"That rules which make the matron (superintendent) and nurses responsible to the house surgeons, or medical and surgical staffs, except in the sense of carrying out current medical orders, above insisted on, are always found fatal to nursing discipline.

"That if the medical officers have fault to find, it is bad policy for them to reprimand the nurses themselves. The medical staff must carry all considerable complaints to the matron; the current complaints, as, for instance, if a patient has been neglected, or an order mistaken, to the ward 'sister,' or the head nurse, who must always accompany the medical officer in his visits, receive his orders, and be responsible for their being carried out.

"All considerable complaint against a head nurse, or 'Sister,' to go, of course, to the matron.

"3. All discipline must be, of course, under the matron (superintendent) and ward 'Sisters,' otherwise nursing is impossible.

"And here I should add that, unless there is, so to speak, a hierarchy of women, as thus—

Matron or Superintendent
Sisters or Head Nurses,
Assistant or Night Nurses,
Ward Maids or Scrubbers,

or whatever other grades are, locally, considered more appropriate, discipline becomes impossible.

"In this hierarchy the higher grades ought always to know the duties of the lower better than the lower grade does itself. And so on to the head. Otherwise, how will they be able to train? 'Moral influence' alone will not make a good trainer. . . . . "

After receiving Dr. Wylie's report it was natural that the committee formed to start a training school for nurses in connection with the Bellevue Hospital should accept Miss Nightingale's advice and adopt her rules for nurses as the foundation of the school. New Haven did likewise. And when the Massachusetts General Hospital School was in process of formation the corporation formed for that purpose began by sending for Dr. Wylie's Report. But these great schools, so well begun, in later years surrendered their charters, and also all prospect of further endowments, to the hospitals with which they were connected. Their educational independence was thus sacrificed.

The loss of what ought to have been recognized as the indispensable foundation of schools of nursing as well as of all other schools, has been and still is the main obstacle in the advance of the profession of nursing. And until such independence is regained and the training schools are either properly endowed or supported from the public funds there is small chance for their improvement.

Hospital-owned training schools, which during the last half century in this country have come to be numbered by thousands, have been of enormous advantage to the hospitals, which not only thus have had almost gratuitous nursing service, but also with the incoming of large successive classes of ambitious young women, have had their sorely needed redemption. Fifty years ago some of the nursing in the Bellevue Hospital, for instance, was by drunken prostitutes who in the old notorious Five Points Police Court were given the option of going to prison or to hospital service. No wonder they were often found in drunken sleep under the beds of their dead patients whose liquor they had stolen. Nor need we go back fifty years for equally awful examples. It is not yet twenty years since the matron of a large almshouse hospital complained to me of being obliged, in order to hold her position, to give diplomas to the nurses she discharged for gross immorality.

That such frightful conditions no longer exist in this country is most largely due to the crusade begun by Florence Nightingale. It was she who sent Agnes Jones to the almshouse infirmary of Liverpool, "Una among the Lions," where was demonstrated the power of noble womanhood over vice enthroned. Nor was it only in selecting the right nurses to send to the different outposts that she was the incomparable leader of the crusade, for she afterwards kept in closest touch with them, ever ready to hear of their battles, to sympathize with their hardships and to glory in their triumphs. She well deserved to be called by them their "beloved chief."

This mighty work of hospital redemption, now so nearly accomplished in all civilized countries, so appealed to chivalrous women that there seemed no end to the stream of incoming probationers. That the great leader herself was so noble, so cultured and so richly endowed was not without effect in winning the assent of fond parents for their daughters' enlistment. Moreover, the new profession that was thus opened was at first almost the only pathway by which ambitious young women could win their independence. The educational and pecuniary inducements in the early years were also not so comparatively small as now.

And yet a quarter century ago Miss Nightingale was lamenting that, whereas at first only noblest motives impelled women of the rarest character to enter the training schools, by that time far less worthy motives were predominant in the crowds of applying probationers. She was puzzled by this as well as saddened.

In the later development of the nursing profession, it must be regretfully acknowledged, Florence Nightingale's leadership was largely lost. Her old pupils of course were her faithful followers to the last. And also many in this country, who had had only the inspiration that came from brief visits and from her occasional messages never swerved in their allegiance. But the thousands who knew her not have followed other leaders. Such perhaps is the inevitable fate of those who so long outlive their own generation.

It could hardly have been expected that one always so determined would in her old age be easily converted to the opinions of others. But it is pitiful that Miss Nightingale, after her long years of undisputed leadership in the nursing world should not have been saved from the bitter contest that arose in England over the proposed registration of nurses. She could not have taken much comfort in her success in blocking that movement, for it resulted in the division of British nurses into two hostile camps. Just as the modern architects ridiculed her fixed ideas regarding hospital architecture, so many of the modern nurses did not hesitate to call her a back number. That, in the opinion of her friends, was not much worse than the condescending tolerance of her opinions in this country.

Had Miss Nightingale and her disciples accepted the fact that, in the evolution of nursing, the training schools were being swallowed by the hospitals, they perhaps would not have clung so persistently to their preference for the continued watchfulness over nurses by the schools from which they were graduated. For, when the education of their pupils for subsequent service was at best only a secondary object of such schools, it could not be expected either that they would look after their graduates or, if they did, that the nurses themselves would relish such guardianship.

The fact is that this beautiful feature of the deaconess schools and of the Catholic Homes, both Roman and Anglican, in which Miss Nightingale herself was trained, belongs to the past. The same separation that nearly a thousand years ago occurred between the clerical and the medical professions has in these later years come between the professedly religious and the unsectarian lay schools of nursing.

Chapels and chaplains, for the inspiration and consecration of pupil nurses to the service of God in serving his afflicted children, are no longer considered necessary. Mother Houses to which worn out nurses can return are not even thought of by modern schools.

In this radical departure of the training schools from Miss Nightingale's ideals, as exemplified in the School at St. Thomas's, there may have been some gain. There certainly has been distinct loss. The hospital ownership of the training schools is the main cause of the graduates' lack of interest in the welfare of their schools. Loyalty to their hospital is a poor substitute for devotion to their Alma Mater.

So long as the hospital training schools had only to pick their probationers from long waiting lists of applicants little attention was paid to the drift of the schools away from educational ideals. The immediate usefulness of the pupil nurses was the paramount consideration: their fitness for subsequent service was a secondary matter. Few appreciated the significance of the fact that practically none of the thousands of yearly graduates from the colleges were coming to the training schools. But now, when throughout the country there is such a serious shortage of applicants, and when graduate nurses are advising their younger sisters not to follow in their footsteps, the question is being anxiously asked what can be done to make the training schools more attractive.

Professional as well as personal dissatisfaction with present conditions is a hopeful sign. Searching examination into the causes of failure naturally follows. And, although real advance is not obtainable by attempts to repeat past conditions, much help can be found in the rediscovery of the guiding principles of previous successful leadership.

Centennial commemorations of great leaders may thus be very useful. And, in this somewhat discouraging era for those who long for renewed advance in the profession of nursing, there is great hope in the present revival of interest in the lifework of Florence Nightingale.

Original Articles.

MUSCLES AND LIGAMENTS OF LUMBAR AND PELVIC REGIONS: THEIR MECHANICAL ARRANGEMENT AND THE TREATMENT OF THEIR WEAKNESSES.

BY HERMAN W. MARSHALL, M.D., BOSTON.

FLAT foot refers to an anatomic defect of feet. Heights of arches were measured in the past and peculiarities of foot shapes and variations of bones of the feet were noted. Disturbances of muscle balance were investigated, and the term foot strain was introduced. Then many patients were found with flat feet who were stronger than others with high arches.

Finally, as the knowledge of foot troubles increased there was brought into more and more prominence the peculiarities of muscles and ligaments and their mechanical arrangement. Especially their variations in strength from time to time have become recognized as determining factors in onsets and cessations of painful foot symptoms. They are the structures that have to be treated first in the vast majority of instances in relief of foot strains; and, with their increase in prominence there has been a division of the significance formerly attributed to anatomic peculiarities; also there are fewer diagnoses made now of neuritis or rheumatism of the feet.

Careful comparisons of facts and of circumstances attending gradual complete elucidation of foot strains can be made profitably in the study of low back strains, it seems to the writer, as understandings and treatments for the latter are launched apparently on a similar course.

In this paper, therefore, instead of trying to extend our knowledge of rare or common anomalies of vertebrae, or measuring precise degrees of lumbar curves, or going into theories of pressures and pulls on nerve trunks, all of these topics will be ignored to as great an extent as possible in an attempt to explain back symptoms on the basis of mechanical arrangement and variable strengths from time to time of muscles and ligaments of the back.

Muscle masses of the gluteal region and of the erector spinae group with their attachments to the pelvis will be considered; also important sacrosciatic, dorsal sacroiliac, ileolumbar and anterior spinal ligaments.

Figure 1 is a rough diagram that illustrates the following points: Body weight is transmitted to the pelvis along the line L to the upper surface of the sacrum. The latter does not give way because it is slung up to overhanging iliac bones on each side by exceedingly strong dorsal sacroiliac ligaments at A. Assistance is rendered to some degree by ileolumbar ligaments at B. These two opposed forces, one exerted downward at L, and resisted by the other in direction along the line NA toward A, tend to rotate the sacrum. Any point at M will tend

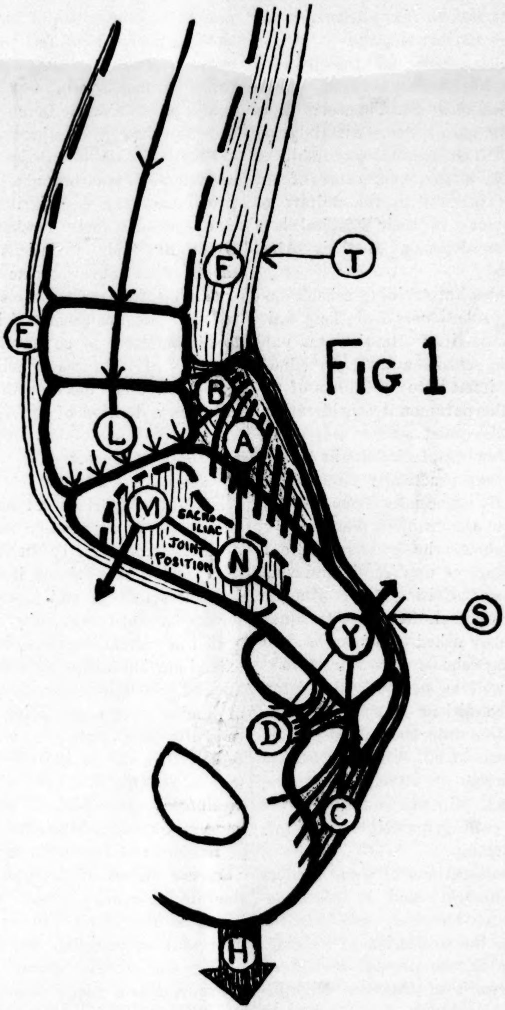

FIG 1

to rotate downward in direction of the arrow at M. Any point at Y will tend to rotate upward in direction of the arrow at Y. There will be a fixed point somewhere at N on which the sacrum rotates as on an axis. Under normal conditions no rotation occurs, however, because strong sacrosciatic ligaments hold down the lower part of the sacrum by forces exerted along lines YC and YD. The anterior spinal ligament at E helps to prevent downward sagging of the upper end at M.

Figure 2 shows dorsal sacroiliac ligaments at 2 and indicates their additional action of binding the sacrum to both iliac bones laterally, maintaining rigidity of the pelvis as well as counteracting the downward thrust of the vertebral column. The greater and lesser sacrosciatic ligaments at 1 and 4 keep the sacrum

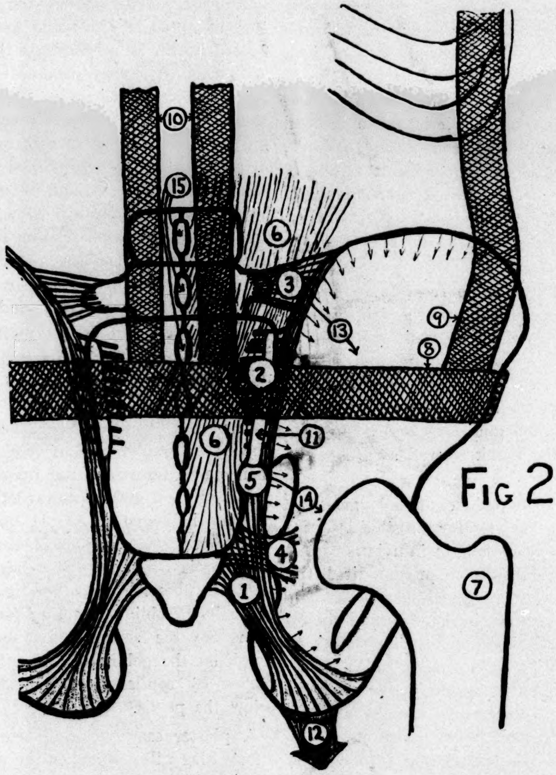

FIG 2

from being displaced laterally with respect to lower parts of innominate bones. They bind the pelvis together firmly at its lower limits. Ileolumbar ligaments at upper limits of innominate bones at 3 help to anchor the base of the flexible lumbar spine to the rigid pelvis, and together with the fifth lumbar vertebra they bridge the pelvis to form its uppermost reinforcements.

As long as these various ligaments retain their normal strengths anatomic anomalies possess no significance, and when ligaments weaken or stretch it is impossible generally to tell whether any existent bony peculiarities as shown in x-rays should be considered advantageous or disadvantageous elements. Regardless of whether there are unusually large, average, or subnormal developments of any bony processes, there will be onset of pathological symptoms, provided ligaments weaken or stretch sufficiently rapidly.

Emphasis cannot be laid too strongly on the fact that sacrosciatic, dorsal sacroiliac and ileolumbar ligaments possess two important functions, namely, of holding the pelvis together and of preventing rotation of the sacrum in a longitudinal plane, as later it will be seen that pelvic belts and transverse straps do not reinforce weakened ligaments perfectly, and that rotary tendencies of the sacrum are particularly difficult to control.

Gluteal muscles act between pelvis and femur in directions indicated at 13 and 14, while erector spinae muscles pull upward, as seen at 6, in a longitudinal direction. Their attachments to the pelvis often become strained and irritated in a manner similar to that shown at insertions of plantar fasciae into the feet.

At lower limits of sacroiliac joints at 5 there are found points of localized tenderness frequently where sacrosciatic ligaments and gluteal insertions both are present, so that it is impossible in this region from location alone to differentiate between sacroiliac joint inflammation, sacrosciatic strain or irritation of gluteal muscle insertions. Similar confusion exists over interpretations of local tenderness at 2 and 3, where there are deeply placed ligaments; also insertions of erector spinae muscles into these ligaments and into the dorsal surface of the sacrum.

Movements of the spine from muscular action shift strains on ligaments in variable manner. The most comfortable position for some patients is a standing posture with delicately balanced poise, and they are uncomfortable when lying down or sitting. Other patients find it impossible to stand erect, and many have lateral lists to the trunk as well as a forward inclination.

It is difficult to explain easily all variations of posture, and reasons for possibilities and limitations of back motions in individual cases, because so much depends on precise directions in which strains were sustained, as well as their degrees. Also because in addition to simple strains borne at times of injuries there are many slight bony displacements which maintain abnormal ligamentous tensions afterwards, although such displacements usually are too slight to be recognized from inspections.

Fortified with precise details of onsets of symptoms, with knowledge of exact ranges of different back motions in each individual case, with definite ideas regarding locations and significance of all tender spots in the back, and with understanding of the mechanical arrangement of the musculo-ligamentous forces that are acting, it becomes possible to identify strains and to prescribe braces most effectively.

The simplest form of support is an adhesive strap applied transversely across the back of the pelvis in a manner to reinforce transverse dorsal sacroiliac ligaments. A webbing belt encircling the pelvis may be employed to perform the same service. If it is narrow, it will be less effective in binding iliac bones and sacrum together than if it is wide enough to include upper and lower limits of the innominate bones so as to exert an even encircling pressure above and below as well as at the middle of the sacrum.

In Figure 2 the pelvic band of a back brace is represented at 8 crossing sacroiliac joints at 2, and it will be seen that a thin flexible steel hoop applied tightly around the body at this point will reinforce more or less all ligaments at 2, 3, 1, 4, in their pelvic actions. The tilting pull at 1 and 4, as well as the downward thrust at 2 and 3, represented more clearly in Figure 1 at C, D, A, and B, will be combated by transversely applied belts, however, only through the increased friction they produce between opposed surfaces of sacroiliac joints. This friction probably is not very effective, when ligaments are relaxed, and what is needed to combat rotation of the sacrum successfully is an additional appliance, or appliances, which reinforce longitudinally acting ligaments and muscles.

The pelvic band at 2 will have no influence upon the upward pull of lumbar muscles on their pelvic insertions, nor upon the downward pull of gluteal muscles toward the femur in directions indicated at 14, 11, and 13. It will not support the longitudinal fibers of the great sacrosciatic ligament when they become weakened at times like all other ligaments. Longitudinally or obliquely acting forces which tend to rotate the sacrum, or to bend thighs and trunk on the pelvis, can be influenced, nevertheless, by appliances which extend above and below the pelvis.

A plaster cast enclosing trunk, pelvis, and affected leg will accomplish the purpose in part, but it will make the individual very helpless. By putting a patient to bed and exerting a longitudinal pull on the leg with extension apparatus, it is possible to reverse the direction of forces acting on the superior surface of the sacrum at L, and simultaneously relieve sagging downward pulls on ligaments at A and B. But the securing of reasonable degrees of activity for patients, avoiding recumbency and casts, while supporting at the same time their weakened longitudinally acting muscles and ligaments sufficiently, is the problem the solution of which is most urgently needed.

Below the pelvis sacrosciatic ligaments and gluteal muscles can be reinforced by adhesive straps applied along their courses, extending upward over sacroiliac and lumbar regions and downward over gluteal and hamstring muscles on the thigh; but this procedure greatly limits leg motions and moreover inelastic straps

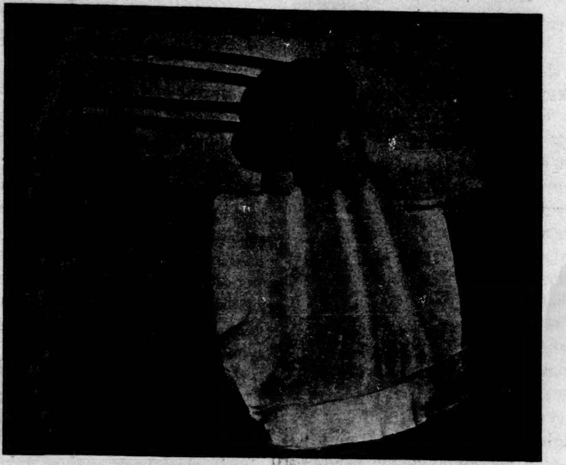

FIG. 3.

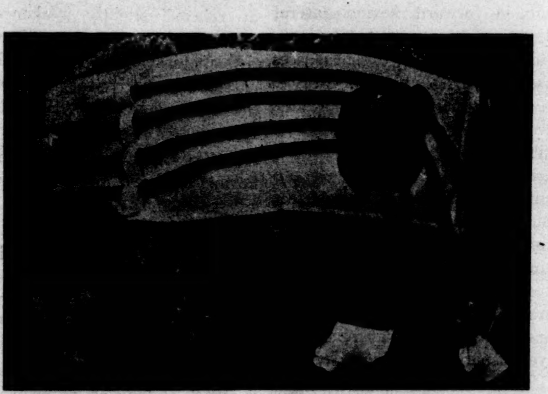

FIG. 3A

pull unbearably hard on the skin in stooping. The difficulty can be solved, however, with some measure of success for moderate strains by the device figured in Figure 3.

Adhesive straps are applied to the affected buttock and thigh so that an extensive adhesive patch is firmly attached and from which a series of rubber cords of suitable size and strength are continued upward to the pelvis in direction of sacrosciatic ligament and gluteal muscle fibers. The rubber cords are passed around pulleys incorporated in an ordinary pelvic belt at the sacroiliac region. The cords pass forward from the pulleys in a horizontal direction on the webbing to buckles in front where they are fastened after adjustments. This arrangement permits any patient to exert a comfortable continuous reinforcing pull directly in line of weakened sacrosciatic ligaments and muscles by simply tightening the cords at the front of the belt. If there are any slippings of the belt, readjustments can be made easily; and bending of the body at the hips is permitted because the long elastic cords stretch readily without increasing tension on the skin at the adhesive patch to an uncomfortable degree, yet they maintain a very considerable continuous pull sufficient to relieve mild muscle or ligament strain.

Figure 3A shows the same pelvic belt as in Figure 3 strapped around bones of a pelvis. It illustrates convincingly the directions of forces pulling on sacrosciatic ligaments, on encircling belt and on elastic cords.

Above the pelvis the large majority of back strains involve back muscles without including to serious degrees the integrity of important dorsal sacroiliac ligaments or anterior ligamentous supports of the spine. These back strains correspond to mild or acute cases of foot strain of short duration and slight foot deformity. Steel braces, corsets, strappings, massage and exercises are common methods of treatment.

A common type of brace consists of two flexible steel uprights applied along the spine, attached below to a horizontal pelvic band, and terminating above in two shoulder straps. Spinal movements in forward flexion, lateral and twisting directions are restricted enough, and back muscles are supported sufficiently to relieve an average mild or moderate muscle strain of the back. Restrictions of shoulder motions is a disadvantage which may be avoided by use of four flexible steel uprights, two posterior and two lateral ones, all of which do not extend quite up to the axillae. Anterior chest and pelvic straps fasten the light, comfortable steel cradle to the lower part of the trunk, and it restricts motions of the lumbar spine sufficiently to relieve moderate low back strains and to allow subsidence of irritation at muscle attachments at lumbo-sacral junctures, yet it permits complete freedom of shoulders.

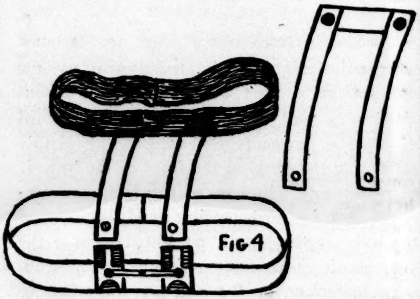

Figure 4 represents a simpler type of support used in connection with corsets for mild muscle strain without sharply localized points of tenderness and without much irritation of muscle attachments laterally at lumbosacral junctures or posterior superior iliac spines. Sets of detachable upright steels of graduated degrees of stiffness and different lengths are provided for the shifting needs of these very mild chronic cases. Anteroposterior curves of upright steels are made greater than lumbar curves of patients, as the latter stand in natural erect, evenly balanced postures. When in use the steel uprights press forward upon the lumbar spine in a manner which patients recognize as comfortable pressures in their hollow lumbar regions. Relief is not the result of direct pressure though, but of the counter pull upon upper ends of the uprights as the body is supported partly by anterior chest bands on which patients unconsciously lean. Thus the elastic steel back springs take a part of the weight that otherwise would be borne entirely by relaxed, slightly weakened erector spinae muscles. In consequence, there is a partial relief of tension on these back muscles which patients naturally, yet erroneously, attribute to the direct gentle force felt upon the lumbar spine.

Stiffer sets of uprights are replaced by more flexible ones and all are dispensed with gradually as soon as the muscles have become sufficiently rested.

These adjustable supports, if used correctly, possess distinct advantages over usual types of reinforced corsets with attached pelvic belts, because such corsets generally are worn too long. Symptoms may subside with use of corsets, but a lower level of muscular equilibrium is struck as long as artificial supports are continued. The principle is a wrong one which incorporates into articles of usual wearing apparel features that should be temporary and that should be replaced by other features of exactly opposite physiological effects soon, namely, increased muscular exercises. Employment of reinforced corsets resembles use of shoes with permanently incorporated arch supports, and the latter have been found generally to possess more disadvantages than merits.

Forward pressures, theoretically, are disadvantageous if important weaknesses of anterior spinal supports in the lumbar region exist, but practically in the mild types of lumbar *muscle* strain relief only is noticed and spinal *liga-*

ments are adequate to hold all usual strains put upon them plus the slight additional forward pressures from back braces.

Extreme antero-posterior lumbar curves are comparable to excessive degrees of foot deformities with considerable stretching of ligaments of the feet. Both indicate that such patients have experienced severe grades of musculo-ligamentous weakness at some time in the remote or immediate past; but neither show conclusively existing strengths of back or feet, for hypertrophy of muscles and ligaments follows subsidence of symptoms very frequently if patients enjoy good health afterwards, and old anatomic deformities may have been compensated for entirely satisfactorily. Both should be corrected as soon as possible, however, if they show severe grades of structural changes associated with continuous pains and functional weakness, but corrections of stabilized lumbar curves have little more merit than upsetting the balance of strong symptomless flat feet.

A deformed foot can be forcibly manipulated and held in corrected position in a plaster cast, then subsequently supported with a foot plate, and finally exercised again into a normal muscle balance. A hollow back likewise can be held in a position of lessened anteroposterior curve with a plaster cast. Recumbency will rest weakened dorsal sacroiliac and anterior spinal ligaments which are responsible for sagging forward of the vertebral column with downward tilting of the sacrum. Exercises can be used subsequently to assist in maintenance of improved posture thus temporarily gained.

The practical question arises whether prolonged irksome treatments needed to lessen lumbar curves and stabilize them in their corrected positions are worth their cost, when one considers the risks of recurrences and excellent efficiencies of some very hollow backs. It would seem that prolonged recumbency treatment in jackets might be restricted profitably to prolonged very extreme cases of back deformities.

Some orthopedic surgeons, however, treat back strains in routine manner by recumbency and plaster casts followed by baking, massage and exercises. This method should yield most satisfactory results at a maximum loss of time and at maximum expense. In a small percentage of cases it is the only adequate method, while in a large percentage of instances this treatment is unnecessary as good functional results from industrial accident cases conclusively demonstrate.

Adjusters for insurance companies abhor plaster casts on injured workmen because they mean prolonged expensive treatment usually. Mechanical braces, massage, manipulations and physical therapy have proved sufficient to return most workmen to industry promptly, even when suffering from severe back strains, so that there has developed an unconscious tendency among industrial physicians to err rather on the side of too little, too brief rest for weakened muscles and ligaments. Some of their cases have prolonged periods of disability simply because massage and exercises are used excessively to a degree that keeps up musculoligamentous irritations.

Finally, there remain the topics of manipulations, nerve involvements, exercises, internal medical measures and abdominal belts to be spoken of briefly.

Slight bony dislocations may result from insufficiency of ligaments not infrequently when back symptoms have been induced by definite traumata. Treatment by mechanical supports as for simple strains, then, is often insufficient. The problem of forcible manipulation is confronted either with or without anesthesia, as it is an established fact that almost instantaneous relief is afforded in some instances while there are possibilities also for very serious additional damage from injudicious maneuvers.

Temporary paralysis of bladder and intestinal sphincters indicates that lumbar or pelvic nerves can be involved at times after slight dislocations to important degrees; but these cases do not disprove the probability that pains and soreness of simple strains are due in the majority of instances to lesions of ligaments, muscles, and to irritations at points of their bony attachments. Usually there is no justification for the diagnosis of sciatica because there is tenderness at the sacrosciatic foramen associated with leg pains. Tenderness at this point commonly means weak, irritated, sacrosciatic ligaments, and leg symptoms often promptly subside when ligaments are supported. Chances for plausible explanations of painful symptoms through reflex nervous mechanisms, or direct pressures and strains are so abundant that no explanations can be proved conclusively as a rule.

Exercises comprise the second part of each physiologic cycle in restorations of normal muscular or ligamentous functions. Brace fitters who do not recognize the importance of massage, manipulations and graded exercises understand only half of their problems; and physical therapeutists who condemn mechanical supports because of their limitations, likewise miss half of the correct conception of their work.

It is true that the majority of patients will get well in time, finally, even though they receive only exercises and no supports; also it is true that patients will recover with supports alone without purposeful massage and exercises when they discard their braces. Best results are attained by combinations and alternations of these two physiologically opposite methods if they are used in moderation in most cases.

Internal medical measures that correct underlying vascular or nervous defects often yield brilliant therapeutic results as when such defects as autointoxications of middle age or anemias of adolescence and early adult life which are diminishing muscle tone and ligamentous strengths are rectified. In the majority of cases of mild back strain without serious traumata at times of onsets, attention to internal medical measures is of far greater importance than corrections of moderate lumbar curves. If first parts of rational treatment, namely, adequate early support of back muscles and internal medical measures are prescribed properly the need of corrections of faulty postures later will be greatly reduced or eliminated entirely.

Abdominal belts have to be mentioned because they increase strengths of lumbar and sacral ligaments and restore muscle tone indirectly through their effects on sagging imperfectly functioning abdominal viscera. The latter are benefited as much sometimes by mechanical supports which pull the organs upward and backward gently toward the spine, as they are by internal medical measures and diet regulations.

The blood, as a result of combined measures, belts, internal medicines and diets, improves in quality, and all regions of the body including relaxed back muscles which have been showing evidences of weakness are restored to their previous normal conditions or possibly to states of greatly increased functional efficiency.

In passing, attention should be called to the fact that functional efficiencies of abdominal viscera and visceral ptosis are two independent matters, although commonly poor functions accompany sagging of the organs.

There are many instances, nevertheless, of extreme visceral ptosis associated with good physiologic function of displaced organs, the latter having slowly readjusted themselves satisfactorily to their altered anatomic positions. Applications of abdominal belts to such patients for correction of their anatomical peculiarities is comparable to anatomic corrections of strong symptomless flat feet or strong hollow backs. More harm than good easily results from disturbing these stabilized satisfactory physiologic balances; for it is very difficult by therapeutic means to push them extremely slowly and gently back into ideal anatomic positions from which it is assumed they came. Rapidity and roughness in corrective measures upset stabilized functions, and when good physiologic efficiencies already exist there should always be very careful weighing of benefits derived from letting patients alone with benefits of increasing both their anatomic and functional effectiveness a little more through protracted, expensive, irksome treatments. It should be needless to add that abdominal belts, as with back braces and foot supports, should be worn for as brief periods as possible and discarded when functions of abdominal viscera are noticeably improved.

The principal cause for unsatisfactory results of treatments of back strains at present lies perhaps in the circumstance that care of these patients is scattered throughout the rank and file of general practitioners. The latter naturally do the best they can with facilities at hand, and many cases recover promptly as a result of the treatments they receive. Serious cases eventually drift into hands of specialists, and numbers which receive early careful study may be augmented somewhat in the future as complexities of the problems and dangers of delay are more universally understood, and as managements of patients' care without suitable facilities and with insufficient familiarity with the difficulties are condemned more strongly and universally.

THE EFFECT UPON THE BLOOD PRESSURE OF THE INJECTION OF ADRENALIN IN DEMENTIA PRAECOX.

By Lawson G. Lowrey, A.M., M.D., Boston,

Chief Medical Officer, Psychopathic Department, Boston State Hospital; Instructor in Neuropathology and Psychiatry, Harvard Medical School,

and

W. W. Wright, M.D., Boston,

Interne, Psychopathic Department, Boston State Hospital, 1918-19.

Two papers on this topic, one by Neubürger and one by Walter and Krumbach, were reviewed in the *Psychiatric Bulletin* for January, 1916, by A. Hoch (page 104). The cases presented showed a considerable variation in reaction to adrenalin, which usually (though apparently not constantly) gives rise to an increase in blood pressure in normal individuals. Both papers present certain cases regarded as normal in which such rise failed to occur. Schmidt (*Münchener Medizinische Wochenschrift*) had shown, as he believed, that cases of dementia praecox, especially the hebephrenic and catatonic types, failed to react to such injections.

The observations recorded in the first two papers mentioned reveal much variation in reaction among the praecox cases, with failure of reaction in certain manic-depressive cases, so that the value of the test in differential diagnosis was regarded as extremely limited, especially in that very difficult field where an accurate aid is so much desired, *i.e.*, between manic-depressive and dementia praecox.

Other observers have claimed that the instillation of adrenalin into the conjunctival sac is not followed by the characteristic reaction in dementia praecox, but S. C. Fuller, working at the Westboro State Hospital, showed that the reaction occurred in otherwise typical praecox cases, and failed to occur in cases not praecox in type, and so concluded that the reaction was of no value in diagnosis.

Our work was done in the winter of 1918. In all seventy-eight cases were tested. The blood pressure was first taken; pressure in the cuff released: a subcutaneous injection of 1 ccm. of 1:1000 P. D. & Co. adrenalin solution given. The blood pressure was then taken five, ten, fifteen, twenty, and thirty minutes after the injection. In sixty-eight of the seventy-eight cases there was a rise in the blood pressure, in all but one case the maximum rise occurring in fifteen minutes, and in all but nine cases within ten minutes. The maximum rise varied from five to fifty mm. Hg., and no significance can apparently be attached to the height of the rise, as the following table will show.

Table I.

Cases Tested and Results.

Diagnosis		Blood Pressure Rise	Blood Pressure Fall
Dementia praecox			
Undiagnosed type	35	30	5
Paranoid	16	15	1
Catatonic	6	6	0
Hebephrenic	3	3	0
Manic depressive	6	5	1
Acute alcoholic hallucinosis	4	3	1
General paresis	5	3	2
Delirium with influenza	2	2	0
Hysteria	1	1	0
	78	68	10

In the unclassified group of dementia praecox, eighteen showed a rise of 10 mm. or less; and only three over 20 mm., one of these reaching 50 mm. Hg. In the paranoid group eight rose 10 mm. or less, and two over 20 mm. Hg. Four of the six catatonic cases rose from 15 to 20 mm.; all of the hebephrenic under 15. Fourteen of the 54 cases in the dementia praecox group showing rise, rose 5 mm. or less.

The only significance to be attached to observations in the other groups lies in the fact that some cases show a drop in blood pressure. The rises are from 5 to 25 mm., most of them under 20.

In the one case of hysteria we were dealing with a man with hysterical paralysis of the right arm. Before the injection the blood pressure in both arms was 110/90. Five minutes afterward it was 135/85 in left, and 130/85 in right; but ten minutes after the injection the blood pressure in the left arm was nearly normal—115/80—while in the right (paralyzed) arm it was 125/80, a striking point meriting further investigation in similar cases.

SUMMARY.

From an analysis of the blood pressure reactions to the injection of adrenalin in 78 psychopathic cases, it is clear that it does not have the value in differential diagnosis which has been claimed for it, at least in early cases, since cases of praecox show a rise and other cases show a fall. In 54 of 60 cases of dementia praecox there was an increase in blood pressure, 40 of these showing rise of more than 5 mm. Hg. In 18 cases of other types taken for comparison there was a depressor reaction in four.

The cases were carefully selected so that we might be as certain as is clinically possible that they belonged to the groups stated.

Medical Progress.

REPORT ON DERMATOLOGY.

By John T. Bowen, M.D., Boston.

A STUDY OF FIFTY WORKERS IN TRINITROTOLUENE.[1]

A study was made of fifty partially selected men engaged in purifying and packing the material, at a plant on the Atlantic slope during September, 1918. The writers group the symptoms of mild trinitrotoluene poisoning as follows, approximately in the order of their usual appearance:

1. Those apparently due to gastrointestinal irritation—distress, diarrhea, loss of appetite, nausea, vomiting.
2. Those due to cutaneous irritation—dermatitis.
3. Those due to alteration of the blood—dyspnea on exertion, dizziness, headache, fatigue, pains in the legs, sleepiness.
4. Those due to renal irritation—urgency and frequency of micturition, lumbar pains.
5. Those due to degeneration of the liver—pain and tenderness in the right epigastrium.

Thirteen men reported cutaneous irritation coming on during the first three weeks of exposure, usually during hot weather. All these men had had the milder symptoms of gastrointestinal irritation during the same period, but with one or two exceptions they did not seem very sick. All the workers' hands were stained and orange color. Gloves did not wholly prevent staining. In many the hair and beard took on a reddish brown tint. In some the whole face had a characteristic wizened, grayish yellow look. In thirty-three a distinct bluish coloring of the mucosa could be made out. Nine cases of dermatitis were seen, the eruption consisting of rather close-set discrete pin-head-sized papules, usually rather red. Its favorite location was the extensor surface of the forearm, though it sometimes appeared on the back of the hand and about the face. There was moderate pruritus. No bullous, crusting, or lichenoid lesions were seen, as has been spoken of by the English writers. It is considered that the characteristic discoloration of the skin, and the cyanosis, give a general indication of the extent of absorption; that the skin is the chief avenue of absorption, and that preventive measures should be aimed largely at avoiding contact with the material. They were forced to the conclusion that poisoning by way of the respiratory tract rarely, if ever, occurs. In some instances ingestion by the mouth is probably of some importance, not only in eating lunch on the premises, but also in chewing tobacco handled with fingers loaded with the chemical.

DERMATITIS FROM OTHER HIGH EXPLOSIVES.

Thibierge[2] describes under the title "Le Bouton d'Huile des Tourneurs d'Obus" a dermatitis in workers in explosive shells characterized by rounded pustules with firm walls, containing thick pus, and surrounded by an inflammatory zone. It occurs on the dorsal surfaces of the fingers, on the hands, forearms, and all parts of the body that are directly exposed, and also all parts of the body in contact with the clothing that has been impregnated. There is often, also, a plugging of the pilosebaceous orifices with a black substance as in tar acne.

Ruxton[3] describes the dermatitis occurring in tetryl workers. It appears on the parts of the body that are exposed to the tetryl dust in the workrooms. There may also be intense irritation of the mucous membrane of the pharynx and to some extent of the stomach. He has seen constitutional symptoms but once.

MacLeod[4] has observed a necrosis of the skin in those handling "composition," an explosive. He showed a woman of thirty, a munition worker, who had small painful necrotic lesions of the hands, especially of the tips of the fingers, which were attributed to handling an explosive "composition," containing fulminate of mercury, etc. There was also a slight iritis from the same cause. Several others in the same factory were similarly affected.

Prosser White[5] reported six cases of trinitrotoluene dermatitis from forty to fifty that he had under observation; also two cases of nitrate of ammonia dermatitis, and one case of stomonal dermatitis in a worker whose task was to distribute the cartridges containing this explosive to the men in the mine. Probably the nitroglycerine and the large amount of common salt were responsible; also cases of dermatitis from "conditioning fluid," a preparation containing formaldehyde.

PROTECTIVE GARMENTS IN THE WAR GAS INDUSTRY.

Major H. C. Bradley[6] in an article with the above title states that the need for highly specialized protective garments for workers developed with the demand for the skin irritant gases, like mustard, which are characterized by rapid penetration of the skin by either vapor or liquid, in addition to the effect on the eyes and the respiratory tract. The gas mask gave good protection to eyes and lungs, but the skin was unprotected by ordinary garments. It was found that rubber garments were ineffective on account of the rapid penetration of rubber by mustard, which is held by the rubber near the skin, and they may therefore do more harm than good. Certain kinds of American oil cloth were found to be fairly good, and a large variety of fabrics were experimented with. It was found that varnished oil cloths, made up by impregnating very closely woven fabrics offered the most protection. This will keep out the vapor for hours and the liquid for shorter periods. Complete suits were made from this material, which were, however, clumsy, fatiguing and hot, and it was difficult to induce the men to keep them on. Air-lined suits like a diving-dress were also devised, but did not attain any extensive usage. The oil cloth suits that were used mostly, could be tied at the wrists and ankles and had in addition protective shoes and gloves and masks when it was necessary. They were removed after factory hours and demustardized with chloride of lime, water, or long airing, but they had many bad features and no very satisfactory procedure had been devised when the war ceased. Protection of the hands was one of the most difficult problems, and gloves of oil cloth, as well as ordinary cotton gloves dipped in linseed impregnating mixtures were tried, but they were quickly worn out. Heavy rubber gloves were fairly good, but the mustard accumulated and was dissolved in the rubber itself and caused burns. Gloves made by impregnating leather gloves with a carnauba wax and oil formula were found to be best and the same formula was used to impregnate leather shoes.

ALOPECIA FOLLOWING LA GRIPPE.

Thibierge[7] reports that he had been impressed with the frequency with which la grippe was followed by alopecia in both women and men, the fall beginning, according to his observations, almost always from 55 to 80 days after the beginning of the general symptoms. The fall is, from the beginning, considerable, the comb or light traction with the fingers bringing out a large number of hairs, together with their bulbs. In many cases Thibierge observed this falling to occur in the "patchy" form, characterized by the development of multiple zones of alopecia from one-half to one centimeter in diameter, with oftentimes rather ill-defined contours. This form, as is well known, is frequent in secondary syphilis, and is considered one of the most typical manifestations. In the case of Thibierge's patients, the likeness to syphilitic alopecia was so strong, that the diagnosis of syphilis was not abandoned until the absence of all other signs had been established, and the Wassermann reaction found negative.

The patchy distribution of the alopecia is only temporary, as the violence of the falling soon changes this into a diffuse alopecia of extreme intensity. The hairs affected are often dry, and of grayish appearance; they come out on the slightest traction, and one gets the impression that with a little patience complete baldness could be produced. The scalp is sometimes of normal appearance, more often it is the seat of a moderate desquamation. This alopecia is somewhat more marked after severe cases of la grippe, with high fever, pulmonary and intestinal complications, than after the milder cases, yet is often present in the latter. It is seen especially in those who are much debilitated and reduced in weight. This form of alopecia seemed to have a more rapid evolution and a greater intensity than most of the alopecias that follow the infectious diseases, especially typhoid fever. It is almost equal to the alopecia that follows erysipelas of the scalp, which is so dependent for its intensity and extent on the local infectious process. It seems to disappear rapidly, and to leave permanent baldness only in those predisposed by heredity. Besides local stimulants to the scalp, arsenic, phosphorus, and general strengthening measures are indicated.

Sabouraud[8] in a paper on "Les Alopécies post-fébriles," considers that the epidemic of la grippe that has just passed has been the cause of the most intense cases of alopecia that he has ever seen, except in typhoid fever. He found in this epidemic that the alopecia was always in proportion to the intensity and duration of the fever. The fall of hair is always diffuse but not uniform, as it is especially pronounced on the anterior segment of the head, and about the temples. He advises strongly against cutting off the hair with the idea that it will facilitate the new growth, or that cutting small hairs will increase their size.

THE CUTANEOUS COMPLICATIONS OF BASEDOW'S DISEASE.

DuCastel[9] observes that in the course of Basedow's disease the skin is moist, oily, and of a dirty gray color, and that hyperidrosis is one of the most constant symptoms, most marked in proportion to the severity of the case. Paroxysms of hyperidrosis appear without cause, or produced by the slightest effort or emotion, and they may be diffused or localized.

Vasomotor disturbances are shown by the transient flushings of the face with burning sensations, which are an early symptom of the disease, and these congestions are followed by urticaria and oedema. Dermographism is common.

Nervous oedemas are characterized chiefly by their restricted localization, and they are often also unexpected. This oedema is usually of rather firm consistency, sometimes almost solid, like myxoedema, or scleroderma. Its evolution may be acute, resembling so-called giant urticaria, or chronic. There is a total absence of etiology for these oedemas; there is no cardiac or renal disturbance, and the inefficacy of thyroid treatment seems to show that they are not caused by myxoedema. Purpura is much less common than oedema, and is often hardly more than a tendency. Trophic changes are seen in the skin, and take the form especially of pigment anomalies, sometimes that of scleroderma. It is difficult to state the frequency of melanoderma. A slight darkening is very common, while an intense grade is very rare. There is hardly ever any pigmentation of the mucous membranes.

Vitiligo has been described by numerous writers and also scleroderma, which latter affection has been observed in simple goitre, as well as in myxoedema. The hair and nails have been affected in certain cases and in certain cases there has been a diffuse alopecia leading to total baldness. The relation of exophthalmic goitre to alopecia areata is an interesting one. A number of cases of this association have been reported. Various other skin affections have been described as of occasional occurrence in Basedow's disease, such as telangiectasis, multiple gangrene, etc.

There is also a series of toxic erythemata associated with this disease. Sometimes the intoxication is manifestly of external origin, more often the toxic agent is unknown or of internal origin. Urticaria and pruritus are also frequently present. Erythema nodosum has been noted and also eczema, but these observations are not sufficiently numerous to warrant any deductions, although DuCastel thinks it fair to assume that the disease favors the appearance of eruptions of pyogenic and eczematous manifestations of ordinary appearance, and may cause them to pursue a long course, or to recur in a striking manner.

AN ERUPTION IN SCURVY.

Nicolau of Bucarest[10] describes an eruption that occurred in an epidemic of scurvy that attacked certain formations of the Roumanian army during the winter and spring of 1918. The appearances of this eruption were quite characteristic so that a diagnosis of scurvy could be made from this alone. At least a fifth of all the scurvy cases presented this eruption. The true elementary lesion of this eruption is a small horny papule, which represents an intrafollicular keratosis. Around this primitive lesion there develops more or less rapidly a process of slow infiltration, which gives rise to papules of different sizes, and sometimes to papulopustules. In a large majority of the cases, the eruption first appeared on the anterior aspect of the forearms and thighs, as well as in the subumbilical region of the abdomen. It may remain confined to these regions for a more or less long time, or more commonly it may extend progressively and occupy in a few weeks a large surface of the body, although there are always portions that are not affected, as the head, axillae, wrists, hands and feet, etc. The eruption does not cause pruritus, and may remain stationary for several months, or begin to disappear slowly under rest and appropriate treatment. The papules begin to disappear by absorption and may be gone at the end of five or six months, leaving no trace behind. In some cases the papulopustules are converted into ulcers, which have a sluggish course, with no tendency to healing until the general condition of the subject improves.

It is not only the advanced cases of scurvy that present this eruption, as it is often one of the first manifestations, preceding the lesions of the gums and the cutaneous hemorrhages by several weeks. The writer was enabled, in the course of the epidemic in question, to form a diagnosis of scurvy in many otherwise doubtful cases by means of this eruption alone, hence its importance as a diagnostic sign is to be emphasized.

NEUROTIC EXCORIATIONS.[11]

Papers on this subject were read at the last meetings of the Section on Dermatology of the American Medical Association and of the American Dermatological Association, by MacKee, and Pusey and Senear, respectively. MacKee very properly considers that the term neurotic excoriation is best limited to the traumatic lesions produced by a person without intent to deceive, although Erasmus Wilson has included under the head the neurotic lesions caused by malingerers, and it is with the former class that most of the observations recently recorded are concerned. Several grades of this neurotic tendency are observed, from mild cases in which the excoriations are produced by an unconscious habit of digging at any slight inequality in the skin when absorbed in reading or study, to more pronounced cases in which the habit cannot be controlled and the person finds it impossible to resist the temptation to pick at and dig into all sorts of slight lesions, or variations from the normal condition of the skin.

Another type of an allied nature is that familiar to most dermatologists in which the patients have an obsession that there are foreign bodies in the skin that must be removed in order to get relief. The crusts are continually picked and torn off, and perhaps a little fibrous tissue and serum removed, affording a temporary mental relief, but the procedure is soon renewed. These cases are of the same character as acarophobia, in which the patient has the obsession that he is infested with insects and is constantly picking at the skin, when there may be no lesions at the start, and imagining that he finds insects within it. Sometimes he will produce small particles of woolly fibre or cotton that have cohered to the skin, or even insects that never infest the skin. These cases of true acarophobia are very resistant to treatment, and it is almost impossible to remove the delusion.

Colcott Fox has described cases under the title "Dug-out excoriations" which have a similar origin to the neurotic excoriations of Wilson. They are far more common in females than in males and in people who have not reached middle age. In a majority of these cases there is evidence of a neurotic tendency, in some a definite hysteria, or a family history of insanity. The favorite sites are the face, limbs and chest, although any part of the body may be affected.

Brocq has described under the name of excoriated acne of young women (*l'acné excoriée des jeunes filles*) a condition not infrequently seen in women with acne, that belongs among the types we are considering, in which an almost irresistible impulse to pick and dig at their acne lesions occurs. It should be noted that this type is not always confined to young women but may be met with in those of middle age. There is often a more or less nervous element in these cases. MacKee cites a typical case in an unmarried woman of 22, who had an exceedingly mild acne, which she continually interfered with mechanically so that small papules, comedones and pustules were converted into large nodules and excoriations, and her face was quite severely scarred. This patient was not neurotic and offered no reason for picking except to remove the cause of the lesions.

Pusey and Senear report a case of a traveling salesman of 42, who came for treatment for a disfiguring scarred eruption of his face. The scars were found to be of linear, stellate or oval shape, and evidently represented the sites of previous wounds and cuts of the face. The scars were most pronounced underneath the chin, and in this situation there were also crusted ulcers, and nodules, some of them undermined. He acknowledged that these wounds were caused by his own digging into the skin, as the nodules produced by previous incisions would become uncomfortable, and he got relief by cutting them open, and working into them with a knife or a pair of tweezers. He thought that he had a rare undescribed affection, and had consulted various physicians. He believed that there was diseased tissue in the lesions, which must be removed in order to get relief and effect a cure. He would spend hours standing before a mirror and digging at his face. There was some history of insanity in his family.

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Book Reviews.

Physical and Occupational Reëducation of the Maimed. By Jean Camus. Translated by W. F. Castle. New York: William Wood and Company. 1919.

This volume, *Physical and Occupational Reeducation of the Maimed,* is one of the most complete works describing the French methods of reëducating wounded men. It has been translated into English in order to render assistance to those in this country who are dealing with similar reëducational problems. Four chapters describing English Institutions—St. Dunstan's, Lord Roberts Memorial Workshops, and Queen Mary's Convalescent Auxiliary Hospitals at Roehampton—and the chief types of artificial limbs in use in England have been added as an appendix. The importance of both psychotherapy and physiotherapy, and the general principles in occupational reëducation, such as environment, time of starting training, the physical and mental state of the wounded, artificial limbs, and the choice of occupation, are considered; and the special education of men who have undergone amputations, of men who have received injuries or have been blinded, is discussed with reference to the nature of the injury.

Agriculture promises to be one of the most useful fields of reëducation. Men who have lost one arm are particularly adapted to this work, for agricultural machine levers may be altered to meet individual deficiencies, and a set of five working hands can be provided. A description of the Agricultural School for the Disabled at Ondes, the South-Eastern Institute for Wounded Farm-Hands, and the Belgian School for Agriculture at Port-Villez, shows the methods which have been employed and the results which have been accomplished at these institutions. At the Fayl-Bellot School, the wounded are given instructions in basket-making. The National Dairy School at Mamrille trains men for cheese-making, dairy inspecting, and dairy-farming. The advantages which might be gained by Government encouragement of silk-producing in Algeria are many; methods of organizing this industry are suggested in this volume. This book gives a helpful account of methods which have been used by the French with success, and should be valuable to those in charge of the reëducational work in this country.

Trench Fever. By Major W. Byam, R.A.M.C. London: Henry Frowde, Hodder & Stoughton. 1919.

It is probable that trench fever has been responsible for more disease on the Western Front than any other infection; unless adequate measures are adopted for its prevention, it may be carried to all parts of the world where conditions are favorable for the spread of the louse-borne disease. This is the opinion of the authors of "Trench Fever," in which Major Byam and his co-workers have presented an account of the investigation which has been conducted at Hampstead by the War Office Trench Fever Committee. This committee was the first to demonstrate by experiment the part played by the louse in the transmission of trench fever. The book describes the symptoms of the disease as observed in two hundred consecutive cases. The modes of transmission of trench fever, the question of immunity, and the pathology of the disease are carefully discussed and valuable evidence is presented as a result of these experiments. Trench fever as a chronic condition and its effects upon the heart are illustrated by the histories of a number of patients. It has been found that age, past medical history, the number of attacks, early rest, and individual recuperative capacity all are important factors in the prognosis of trench fever. In the treatment of disease, the following substances, used in the manner described in this book, have been found useful: acriflavine, galyl, collosol argentum, iodine, and antimony, collosol sulphur, manganese, and palladium, colloidal rhodium, intramine, kharsivan, eusol, methylene blue, trypan-red, tartar emetic and foreign protein. The sections dealing with the treatment of the disease in both its acute and chronic forms and the subject of prophylaxis are of particular value. The book is illustrated throughout by many charts and diagrams, and in the appendix are tabulated records of the blood transmission experiments. The volume is an important product of the war, and contributes information of considerable value in the solution of a problem which has only recently been recognized as one of great importance.

THE BOSTON
Medical and Surgical Journal

Established in 1812

An independently owned Journal of Medicine and Surgery, published weekly under the direction of the Editors and an Advisory Committee, by the BOSTON MEDICAL AND SURGICAL JOURNAL SOCIETY, INC.

THURSDAY, AUGUST 12, 1920

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THE VALUE OF ANIMAL EXPERIMENTATION.

THAT the usefulness of animals to mankind extends far beyond the food, clothing, and other material needs they supply is shown by studies of the Bureau of Animal Industry of the United States Department of Agriculture. In a recent address, Dr. E. C. Schroeder, Superintendent of the Experiment Station of that bureau, gave the following instances in which experiments with animals contribute to human health and are of economic advantage otherwise:

The Panama Canal would not have been built by this time if animal experimentation had not revealed the specific nature of yellow fever. If it had finally been constructed with no better knowledge of yellow fever than when the French abandoned the project after a cost of 20,000 lives, it would have deserved such a name as "the water lane of the yellow death."

Animal experimentation has provided vaccines, bacterins, and antitoxic sera; it has aided in the development of new methods of surgery and of reliable means of diagnosing infectious diseases; it taught us how to use gases during the war and how to defend our soldiery against them. In the absence of such knowledge the recent war would have cost additional thousands of lives and would have produced many additional thousands of cripples.

If animal experimentation had not taught us how to cure many diseases of the lower animals and how to suppress appallingly destructive live-stock plagues, the hunger and starvation prevalent in some parts of the world would be practically universal. Experiments with animals have provided means for controlling human diseases like smallpox, Asiatic cholera, bubonic plague, malaria, typhus fever, and yellow fever.

Animal experimentation has enabled the United States to exclude from the country, or to control, food-destroying diseases like rinderpest, foot-and-mouth disease, anthrax, Texas fever, hog cholera, surra, swine erysipelas, contagious pleuropneumonia of cattle, and sheep scab.

Without abundant live stock—the result of animal-disease control—it is questionable whether food enough for the present population of the world could be produced. Live stock convert enormous quantities of grass, hay, and coarse vegetable matter, unfit for human stomachs, into easily digested, nutritious food.

Because of the similarity between the human body and the higher animals, discoveries useful to stockmen and veterinarians are of service also to hygienists and physicians. Animal experimentation has resulted in the following basic knowledge: Circulation of the blood, capillary circulation, the vasomotor mechanism, functions of the nervous system, the flow of chyle in the lacteals, the passage of chyle through the lymph ducts into the venous circulation, the nature of the digestive fluids and chemical transformation of food through their action; functions of the lungs, kidneys, and other organs; the reaction of the cells to various kinds of stimuli; significance of the endocrin glands, nature of inflammation and other pathological processes; and numerous other discoveries in physiology, pathology, and biochemistry.

Experiments with live stock have contributed richly to the current knowledge of drugs and their uses and to the precise information we have of the therapeutic, physiologic, and toxic actions of the innumerable substances from which our useful drugs have been selected.

Without specific knowledge of how drugs act on the body as a whole, or on special parts of the body, and whether their action is immediate or cumulative, the death rate among persons and animals would be multiplied, and the greater losses among the latter would be a serious economic disadvantage.

Animal experimentation has proved that the manifestations of tuberculosis in different portions of the body and in the bodies of different species of animals all have one essential cause; it proved that the disease is contagious; it led to the discovery of the tubercle bacillus; it proved that the bacillus is quickly destroyed by light, but may long remain alive and virulent in dark places: it proved that there are three types of tubercle bacilli, the human, the bovine, and the avian; it proved that the avian type is not an important cause of disease among mammals; it proved that the human type is the commoner cause of tuberculosis among human beings; it led to the discovery of tuberculin, without which, used as a diagnostic agent, the control and eradication of tuberculosis among food-producing animals would be impossible.

Experiments with animals have given information that prevents untold suffering of both persons and animals by aiding in the preservation of health and hastening recovery from sickness. Persons who treat diseases among animals probably relieve more pain every day than animal experimentation causes in a score of years; and they do this through the agency of knowledge that the experiments supplied.

The foregoing summary of results is believed to be of general interest especially as it relates to the frequent assertion that live stock receives more scientific study than human beings. The fact remains, however, that greater knowledge and skill applied to live stock raising is a definite means of benefiting mankind. For instance, the development of an ample and safe milk supply is obviously a practical way to reduce mortality among and to correct undernourishment of babies. Similarly the eradication of parasites in sheep is an essential step toward an adequate supply of wool clothing.

BRITISH TRIBUTE TO AN EMINENT AMERICAN SURGEON.

At a dinner given by the American Hospital in London in honor of Dr. Charles H. Mayo of Rochester, Minnesota, worthy tribute was paid to Dr. Mayo and to the American profession by Lord Reading, president of the hospital, and by Mr. Balfour. Lord Reading expressed his belief that between England and America there exists a greater bond of sympathy than between any other two countries. In proposing the health of his guest, Lord Reading said that the names of Dr. Mayo and his brother were household words in America, in England, and elsewhere wherever medical education and research were honored and wherever there existed a desire to promote them. Lord Reading referred to the constant interchange of men and ideas between the two great English-speaking countries and stated his conviction that the institution of the American Hospital in London will be another link in the chain which binds together England and America. In responding to the toast, Dr. Mayo referred to the heredity of Americans, which is mainly British, and said that the bond of friendship which exists between these two countries can never be broken. Dr. Mayo pointed out that the development of the American Hospital in London is another proof of Anglo-American unity. Mr. Balfour also commented upon Dr. Mayo's work and expressed the hope and belief that the American Hospital in London will further greatly international medical progress. In medicine, said Mr. Balfour, more than in any other science, human interests are reached closely, and there is added a humanitarian touch which glorifies even the most sublime scientific discovery. It will prove to be a great advantage for medical ideas on each side of the Atlantic to be known to the profession of the other. A more complete understanding is needed than can be acquired through reading, if surgeons, physicians, students, and investigators in medical science are to promote professional interests and activities to the best interests of humanity. Mr. Balfour believes that nothing could be of more value to international medical progress than an institution like the American Hospital in London.

MEDICAL NOTES.

Appeal for Nurses in New York.—The New York Health Department through the Bureau of Child Hygiene has issued the following appeal for nurses:

"Nursing as conducted by the Bureau of Child Hygiene, puts the trained nurse in place of the teacher. They teach and influence the young mothers and school children on the principles and prevention of disease. The Health Department offers many advantages and opportunities for promotion to trained nurses that are not available through either private or institutional nursing.

"The public health nurse is pensioned after twenty years' service on half pay, and while in active service she is entitled to a month's vacation, all legal holidays and Sundays and half day Saturdays. Unlike the private nurse, she does not have to 'live in her dress suit case' and work long hours. When a case is finished the nurse must return to the registry and wait in idleness for the next case.

"Applicants for nursing in the department must be citizens and residents of this State, and they must be registered nurses before certification. The salary after August 20, will be $1,144 a year."

Appointment of Dr. V. J. Harding.—The announcement has been made of the appointment of Dr. V. J. Harding, associate professor of biological and physiological chemistry at McGill University, to the professorship of pathological chemistry in the University of Toronto.

Military and Naval Insurance and Compensation.—There has been issued recently by the Bureau of War Risk Insurance an actuarial report entitled, "Military and Naval Insurance and Military and Naval Compensation Claims as the Result of the World War," which was printed in a very limited edition and is a valuable addition to the statistics of the subject.

The report constitutes a scientific cross section of the period of actual hostilities and the high tide of demobilization between April 6, 1917, and June 30, 1919, in a study of the exposure of the American forces of war hazards, based on an analysis of 104,485 death cases in their relation to the payment of War Risk Insurance, 565 cases of total permanent disability payable under the insurance, provisions of the War Risk Act, and 25,251 cases of death, and 32,876 cases of disability ranging from cases of total permanent disability to disability of 10 per cent. under the compensation features of the Act, which are separate from the insurance features.

BOSTON AND MASSACHUSETTS.

Week's Death Rate in Boston.—During the week ending July 24, 1920, the number of deaths reported was 135 against 155 last year, with a rate of 9.40* against 10.15 last year.

The number of cases of principal reportable diseases were: Diphtheria, 25; scarlet fever, 12; measles, 51; whooping cough, 55; typhoid fever, 8; tuberculosis, 54.

Included in the above were the following cases of non-residents: Diphtheria, 4; scarlet fever, 2; measles, 3; tuberculosis, 8.

Total deaths from these diseases were: Diphtheria, 1; measles, 1; whooping cough, 2; typhoid fever, 1; tuberculosis, 14.

Included in the above were the following non-residents: Diphtheria, 1; tuberculosis, 4.

Week's Death Rate in Boston.—During the week ending July 31, 1920, the number of deaths reported was 164 against 173 last year, with a rate of *11.43 against 11.32 last year.

The number of cases of principal reportable diseases were: Diphtheria, 29; scarlet fever, 15; measles, 18; whooping cough, 42; typhoid fever, 6; tuberculosis, 39.

Included in the above were the following cases of non-residents: Diphtheria, 7; scarlet fever 2; measles, 1; typhoid fever, 1; tuberculosis, 6.

Total deaths from these diseases were: Diphtheria, 2; scarlet fever, 1; whooping cough, 2; tuberculosis, 20.

Included in the above were the following non-residents: Diphtheria, 2; scarlet fever, 1; tuberculosis, 1.

Appointment of Dr. W. Thurber Fales.—Dr. W. Thurber Fales of Malden has accepted an appointment as instructor in biology and public health in the medical school of the Johns Hopkins University.

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* Rate figured to conform with Boston's population estimate as given in Federal Census of 1920.

Correspondence.

THE NURSING PROBLEM.

Mr. Editor:—

The papers read at the recent Massachusetts Medical Society's meeting in the Hospital Administration Section, and the resulting discussion raise a pertinent question. In our attempts to improve the standard for nurses by set regulations and requirements are we not in danger of losing sight of our ideal?

Our ideal, it readily will be admitted, is to furnish the best possible nursing service to the community. It will also readily be admitted that a high school graduate, or, still better, a college graduate, when given four years of hospital training, should be a better trained nurse than one without such thorough training. But there always have been and always will be women qualified by knowledge and character but without such training who can serve the community most acceptably as able and trusted nurses.

The nursing situation is acute. There are not enough good nurses to meet the demands of the community and there are not enough women entering our nursing training schools to meet the demand for nurses that will exist in the future.

Various and sundry plans are offered to meet the situation. Some suggest raising the standard of the requirements for nurses and legislative action has been proposed along this line. Others, particularly those interested in the nursing problem as it affects the state hospitals, have opposed action which they think would tend to make the nursing problem in the state hospitals still more acute. The opponents of the proposed legislation recognize that if a high school requirement is enforced there are not going to be enough high school graduates in the country to supply the demand, not even allowing for the fact that a great majority of high school graduates have not planned to become nurses. Seemingly there is on foot an attempt to organize the nurses into the equivalent of a labor union and to introduce closed-shop methods with fixed rules as regard hours, wages, etc. Perhaps the community will agree that organization and closed-shop methods that demand fixed hours and flat wage scale, regardless of individual ability or experience, are advisable for nurses, but there is also an excellent chance that the community will hold that nursing is a branch of public service and should no more be unionized than the police force.

To have the nurses registered is commendable but to decree that only graduates of certain training schools can be registered and that these graduates must be high school trained is absurd and impractical. It is doubtful if the profession of nursing will be benefited by carrying through a plan of registration that says to the great majority of women who earn money by caring for the sick: "You are not trained nurses, you are only attendants." An attempt to improve nursing standards is to be commended, but an attempt to handicap, even though merely by nomenclature, the great body of nurses must give rise to much criticism and injustice. As a case in point, showing the absurdity and injustice of regulations, I know of one excellent nurse of superior antecedents, academy trained, president of her hospital training school class, a graduate of the post-graduate course at the Massachusetts General Hospital, an assistant superintendent of nurses in a large western hospital for one year, a superintendent of nurses in a Boston hospital for more than a year, who saw service for over two years with a Boston hospital unit in France and has since taken a post-graduate course in public health nursing at Simmons College, who now finds that in the future she will be debarred from any work with the Red Cross because in her initial training she did not have two consecutive years within the walls of a hospital.

The community presumably would be benefited by the registration of all women practising the nursing profession in the community and the suggestion is made that it would be well to register all women who are practising nursing, regardless of training, as registered nurses and that their registration cards should show the extent of their training and that such a registration card should be exhibited to anyone desiring to employ the nurse's services. The nurses then could be further classified on their registration cards as pupil or graduate nurses. Such a scheme would give the public greater knowledge of the women who are attempting to practise the nursing profession. It would avoid the disliked term, "attendant," and would help solve the present situation as it would open a chance of remunerative service to women who have had some training, and at the same time would encourage these women to take more and more training, in order to be more highly graded. The present system which allows a nurse who has no wide experience to put on a black band and demand five dollars a day or more as a trained nurse might be improved.

It is most unfortunate to have any discussion as to nomenclature further handicap those who are attempting to provide nurses for our state hospitals, or to frustrate the efforts of those who are trying to improve the standards of the nursing profession.

Dr. Worcester's recent editorial in the JOURNAL is suggestive and helpful but it is surprising that in his different branches he includes no division of mental nursing. The importance of mental nursing is being more and more recognized and there seems no reason for demanding that there should not be complete reciprocity between mental and general hospitals. If it is right to demand that the mental nurse must have some general hospital training it certainly should be entirely right to demand that every general hospital nurse should have some mental training.

The importance of mental training was thoroughly demonstrated by the experiences in the war and it can hardly be denied that a nurse with some knowledge of psychiatry and occupational therapy is better qualified for community nursing than a nurse without such training.

It is most sincerely to be hoped that the efforts to furnish the best possible nursing services to the community will be successful, and that the desires both of those who are striving to raise the standards of nursing and of those who are attempting to keep the standards low enough to allow an adequate number of women to enter the profession will be realized.

Yours very truly,
DONALD GREGG, M.D.

Wellesley, Mass., July 28, 1920.

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RECENT DEATH.

DR. NORMAN PERKINS QUINT, a retired Fellow of the Massachusetts Medical Society, died at a private hospital in Boston, July 27, 1920, aged 73. Dr. Quint was born in Malden, graduated from the high school in that town and from Harvard Medical School in 1870. For nearly 20 years he had been medical examiner for the 7th Norfolk District, having his residence in West Medway.

MAY 1, 1919, JOURNAL WANTED

The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass., will pay 25c for a copy of the Journal of May 1, 1919. Please mail as early as convenient, to this office, and we will remit by return mail.